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XLV.—*On* Duncanella, *a new Genus of Palæozoic Corals.*

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My friend Mr. U. P. James, of Cincinnati, well known amongst American palæontologists by his 'Catalogue of the Lower Silurian Fossils of Ohio,' has recently placed in my hands several specimens of a curious little coral from the Niagara group of Indiana, which appears to me to form the type of a new genus, and which I propose to call *Duncanella*, in honour of Professor P. M. Duncan, one of the highest of living authorities on the fossil Actinozoa. The characters of the genus are as follows:—

Corallum simple, conical, free, and non-adherent. Calice deep, circular, very slightly expanded above. Septa included within the calice, apparently in multiples of six, extending to the centre of the theca. A columella wanting, or at any rate non-determinable. Epitheca well developed, with vertical and encircling striæ extending to the margin of the calice, but deficient at the base, where it leaves a circular aperture from which the septa protrude in the form of a small cone. No tabulæ or dissepiments.

The affinities of *Duncanella* would appear to be with the Turbinolidæ; but it cannot be placed under any recorded genus of this family, nor does it even show any decided relationship with any type of the Aporosa. I should have been

disposed to place these corals under the genus *Petraia* but for two facts. In the first place, the septa appear to be clearly arranged in multiples of six, being twelve at the base and eighteen in number at the calice; whilst, in the second place, there is the anomalous character that the extreme base of the corallum is destitute of an epitheca. The visceral chamber is thus open below as well as above, the inferior aperture being distinctly circumscribed, circular in form, and exposing to view the slightly exsert septa. At first sight I thought this aperture might perhaps be accidental; but it is present in all the specimens I have examined, with the exception of one large example, in which it appears to have been cicatrized, and is only obscurely and with difficulty recognizable. From the cyathophylloid corals *Duncanella* is

Duncanella borealis, Nich.: *a*, side view of an average specimen, of the natural size; *b*, vertical section, showing the very deep cylindroid calice; *c*, transverse section, enlarged; *d*, side view of the base, enlarged, showing the inferior aperture and slightly exsert septa; *e*, the base viewed from below, much enlarged, showing the absence of the epitheca and the septa meeting in a central point.

distinguished by not having the septa in multiples of four, and by the total absence of tabulæ or dissepiments. From *Cyathaxonia*, lastly, the present genus is distinguished by its want of a columella and septal fossette, the number of the septa, and the characters of the base.

The following is the only species of the genus that has come under my notice :—

Duncanella borealis (Nicholson).

Corallum simple, free, cylindro-conic, from 7 to 10 lines in length, and 2 lines in diameter at the calice. The base is truncated, destitute of an epitheca, and exhibiting a circular opening about half a line in diameter. Within this opening are seen twelve septa which extend from the circumference to the centre, and usually project slightly in the form of a little cone. The rest of the coral is covered with a well-developed epitheca, which exhibits well-marked longitudinal ridges, together with a few shallow annulations of growth, between

which are fine encircling striæ. The calice is extremely deep, occupying about one third of the total length of the corallum, cylindroid, and only slightly expanded towards its margin. Eighteen equally developed septa appear in transverse sections of the coral immediately below the bottom of the cup; and these meet in the centre of the visceral chamber, apparently without the intervention of any columella, though seemingly somewhat elevated centrally. There are no traces of either tabulæ or dissepiments, and the interseptal loculi appear to extend uninterruptedly from the base to the calice. Towards the margins of the calice the septa appear to become obsolete; but their free edges are unknown.

Locality and Formation.—Niagara Group (Upper Silurian), Indiana, U.S.A. Collected by Mr. U. P. James.

XLVI.—*On a new Genus of Carboniferous Polyzoa.* By Professor JOHN YOUNG, M.D., and Mr. JOHN YOUNG, Hunterian Museum, University of Glasgow.

[Plate XVI. B. figs. 1-6.]

AFTER a careful examination of the literature of *Ceriopora gracilis*, Phillips, sp., the only conclusion we can come to is that a polyzoon and a coral have been confused. With the coral we have not at present to do; but to make clear our position, we shall quote the generic and specific descriptions.

"CERIOPORA (pars), Goldfuss, 1826; Blainville, 1834; D'Orbigny, 1847.

"Colony fixed by the base, from which cylindrical dichotomous branches proceed, giving a dendroid aspect. Each branch is provided with several superposed layers, enveloping each other, the cells being simply round pores on the surface.

"Goldfuss, in 1826, placed under *Ceriopora* a multitude of diverse Bryozoa. In 1834 Blainville considerably restricted the characters of the genus, and only placed in it species provided with several layers of superposed cells, whether the colony is branching or bulbous. Now, in accordance with the plan we have adopted with all the Bryozoa, we think the name *Ceriopora* ought to be reserved more specially for the branching dendroid species, the globular non-dendroid species forming the genus *Reptomulticava*. Hence it will be necessary to change the names of several of the *Cerioporæ* admitted in 1847 into our 'Prodrome de Paléontologie Stratigraphique;'